

Date: Wednesday, 28/01/2009 5:00:41 PM  
 User: Julie Dawson

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : SHORT STEP ASSEMBLY HIGH SKID LH
<b>Job Number</b> : 45341	
<b>Estimate Number</b> : 10575	
<b>P.O. Number</b> :	<b>Part Number</b> : D350591213UP
<b>This Issue</b> : 28/01/2009 <b>S.O. No.</b> :	<b>Drawing Number</b> : D3078 REV A
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : / / <b>Type</b> : LARGE FAB ASSY	<b>Drawing Revision</b> :
<b>Previous Run</b> : 43690	<b>Material</b> :
<b>Written By</b> :	<b>Due Date</b> : 26/02/2009 <b>Qty:</b> 1 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : <u>JUD 09.01.29</u>	
<b>Comment</b> : Est Rev:B 05.10.14 Modified step 10 KJ/EC	
Est Rev:C 06-06-19 Added D2732-030 AS PER DSI9294 JLM	
Est Rev:C 06-06-27 Revised as per DSI9340 JLM	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



HJ for JUD 09/02/19

**Comment:** DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-213 CHG002

2.0	D2622120C	Step Extrusion
-----	-----------	----------------

**Comment:** Qty.: 0.5000 Each(s)/Unit Total : 0.5000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2622-120C

Extrusion B42155

SAD 09-02-02

3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
-----	-------------	------------------------------

**Comment:** LARGE FABRICATION RESOURCE 1

1-Cut D2622-120 extrusion to 59.75" long as per Dwg D3078

2-Drill extrusion as per Dwg D3078 using Jig DT8680 for rivets.

3-Deburr

SAD 09-02-02

4.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------

**Comment:** INSPECT WORK TO CURRENT STEP

S 09/02/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 28/01/2009 5:00:42 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID LH

Job Number: 45341

Part Number: D350591213UP

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D30671

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3067-1

End Plate

*341447*

*Ph 09-02-05 1*

6.0

D30631

Support



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3063-1

Support

*341031*

*Ph 09-02-05 1*

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8681, weld Fwd End Plate as per QSI 004 & Dwg D3072

A/R Aluminum Rod

*M108031*  
*M109560*

3-Grind End Plate flush

*Ph 09-02-05 1*  
*Ph 09-02-05 1*  
*Ph 09-02-09 1*

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*PD 09-02-10*

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*09/02/10 @*

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*Ph 09-02-10 1*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID LH

Job Number: 45341

Part Number: D350591213UP

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

SAD 09-02-10 (1)

12.0

D3065041

Step Leg Assembly Hi



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3065-041

Step Leg Assy

B43858

SAD 09-02-10

13.0

D30661

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D3066-1

Spacer

B44329

SAD 09-02-10

14.0

MS20600AD4W4

Rivets



Comment: Qty.: 16.0000 Each(s)/Unit Total: 16.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

16 MS20600AD4W4

Rivet

M110 468

SAD 09-02-10

15.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Rivet Leg Assembly as per Dwg D3078.

SAD 09-02-10 (1)

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SAD 09/02/10 (HLH)

17.0

D30671

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3067-1

End Plate

B41447

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 28/01/2009 5:00:42 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID LH

Job Number: 45341

Part Number: D350591213UP

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel Aft end for welding

2-Inspect for foreign object as per QSI 024

3-Weld Aft End Plate as per QSI 004 & Dwg D3078

A/R Aluminum Rod *M108037*

4-Grind End Plate flush

*Sh 09.02.12 1*  
*Sh 09.02.12 1*  
*Sh 09.02.12 1*  
*Sh 09.02.12 1*

19.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*09.02.13 (1)*

20.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*09.02.13 (1)*

21.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch Up Chemical conversion

DO NOT PAINT - DO NOT APPLY WING WALK

*FD 09/02/17 (1)*

22.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Inspect Powder Coat and Wing Walk

*09.02.17 (1)*

23.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

24.0

D22301

Lug



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 D2230-1

Clamp

*44700*

*SS 09/02/19 (1)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Date: Wednesday, 28/01/2009 5:00:42 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID LH

Job Number: 45341

Part Number: D350591213UP

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

D22303

Lug



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 D2230-3

Clamp

44701

26.0

D2732

Rubber Extrusion



Comment: Qty.: 1.0500 f(s)/Unit Total : 1.0500 f(s)

Pick: Packing Kit

Qty Part Number

Description

Batch

4 D2732-030(3" LONG)

Rubber Cushion

38509

27.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 0.6000 f(s)

Pick: Packing Kit

Qty Part Number Description Batch

1 D2856-400(7.2")

Abrasion Strip

42437

28.0

AN335A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 AN3-35A

Bolt

M108827

29.0

AN411A

Bolt



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 AN4-11A

Bolt

M106605

30.0

AN413A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch:

M10865

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 28/01/2009 5:00:42 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID LH

Job Number: 45341

Part Number: D350591213UP

Job Number:



Seq. #:

Machine Or Operation:

Description :

31.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

4 AN960JD10

Washer

M110139

32.0

AN960JD416

Washer



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

12 AN960JD416

Washer

M110523

33.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 MS21042L3

Nut (or -3)

M109798

34.0

MS21042L4

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

6 MS21042L4

Nut (or -4)

M109282

35.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

36.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-213

Location:

PPP Rev:

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 28/01/2009 5:00:42 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY HIGH SKID LH

Job Number: 45341

Part Number: D350591213UP

Job Number:



Seq. #:

Machine Or Operation:

Description :

37.0

QC21

FINAL INSPECTION/W/O RELEASE



09/02/23 *[Signature]*

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



*mf*  
09-02-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. <b>D3078</b>	REV. A SHEET 1 OF 2
DATE <b>02.09.11</b>		TITLE <b>STEP ASSEMBLY, HI SHORT</b> SCALE NTS	
A	02.09.11	NEW ISSUE	

Part No.	Description	QTY -041	QTY -042
D3078-041	Step Assembly, High Short (LH)	X	
D3078-042	Step Assembly, High Short (RH)		X
D2622-60	STEP EXTRUSION	1	1
D3063-1	SUPPORT	1	1
D3065-041	LEG ASSEMBLY	1	1
D3066-1	SPACER	2	2
D3067-1	END PLATE	2	2
MS20600AD4W4	RIVET	16	16

**GENERAL NOTES:**

- 1) -041 SHOWN, FOR -042 INSTALL D3063-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

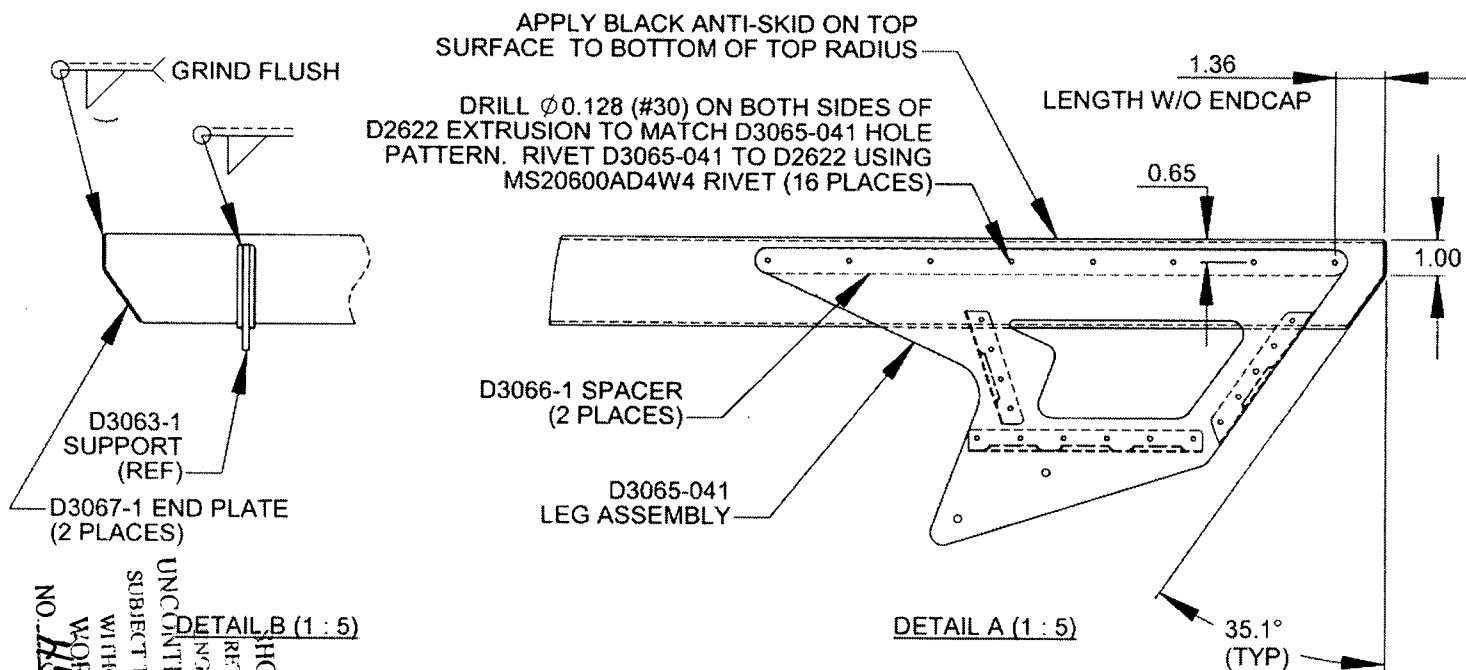
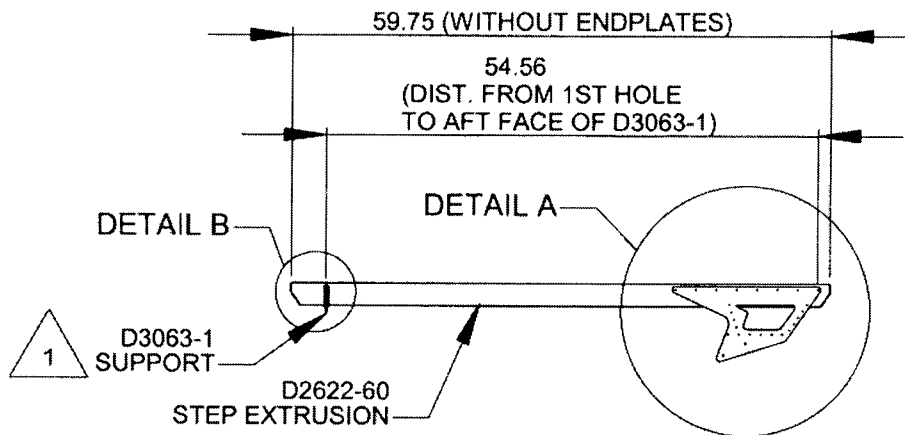
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **45341**

**COPYRIGHT © 2002 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN	DRAWN BY	<b>DART AEROSPACE LTD</b>
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. A
02.09.11	D3078	SHEET 2 OF 2
	TITLE	SCALE
	STEP ASSEMBLY, HI SHORT	1:20



NO. 1534

WORK ORDER

SUBJECT TO AMENDMENT

WITHOUT NOTICE

UNCHECKED COPY

RETURN TO

ENGINEERING

SHOP COPY

COPYRIGHT © 2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.